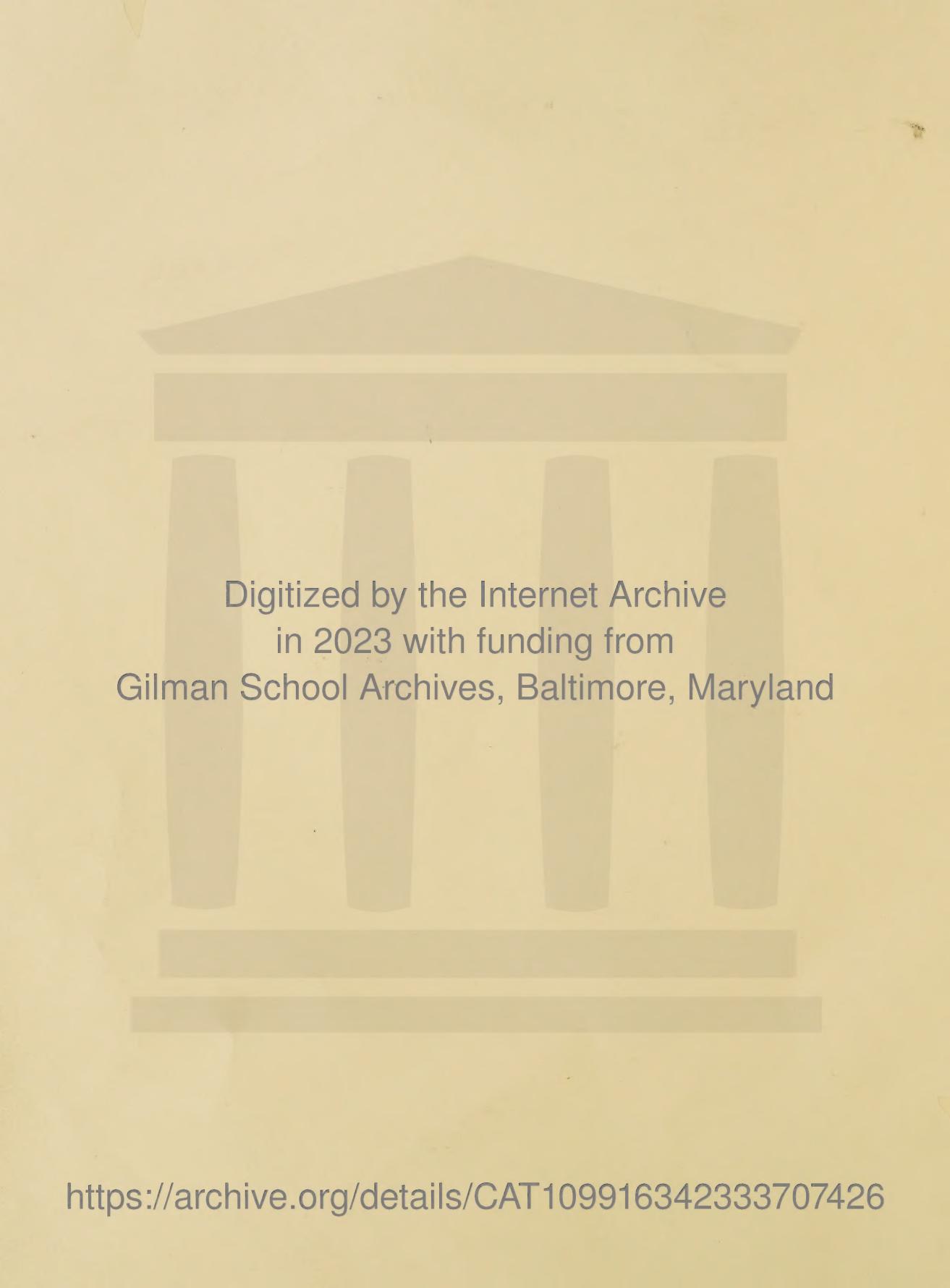


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SADYE F. ADELSON

# CHANGES IN DIETS OF HOUSEHOLDS, 1955 TO 1965

## IMPLICATIONS FOR NUTRITION EDUCATION TODAY

Despite higher income and the opportunity to choose from the greatest abundance of foods in U. S. history, there has been a somewhat adverse shift in household food consumption and thus in dietary levels in the past decade. On the basis of these findings from the spring 1965 nationwide household food consumption survey, Secretary Freeman has directed an expanded nutrition education program by the U. S. Department of Agriculture. The report presented here is appearing also in the May-June *Nutrition Program News*, which is a bimonthly publication of the USDA.

THE RECENT nationwide survey of household food consumption showed that 50 percent of the households in the United States had diets that were rated "good" in the spring of 1965. These diets met the Recommended Dietary Allowances set by the Food and Nutrition Board of the National Academy of Sciences-National Research Council (NAS-NRC) for protein, the 2 minerals—calcium and iron—and the 4 vitamins—vitamin A value, thiamine, riboflavin, and ascorbic acid.

About 20 percent of the households had diets that were rated "poor." Diets were rated poor that provided less than  $\frac{2}{3}$  of the allowance for one or more of the nutrients studied. Two-thirds of the allowance for any nutrient is considered a level below which diets could be nutritionally inadequate for some individuals over an extended period.

About 30 percent of the households had diets that ranged between good and poor. Such diets are sometimes labeled "fair" for want of a more descriptive term.

Nearly 40 percent of the households with incomes under \$3,000 had poor diets. Some but proportionately fewer poor diets were found at higher income levels, even the highest.

Somewhat more diets were graded poor in 1965 than in 1955, when the previous nationwide survey

was made. Decreased use of milk and milk products, vegetables, and fruit—the main sources of calcium, ascorbic acid, and vitamin A value—was chiefly responsible for the changes in dietary levels.

The survey provided no indicator of nutritional status. Thus, no information is available on hunger or malnutrition in the United States from this survey.

### THE SURVEYS

The two most recent nationwide surveys of household food consumption were made in 1965 and in 1955. These were the fifth and fourth such nationwide surveys made by the United States Department of Agriculture. The earlier ones were made in 1948, 1942, and 1936. The 1965 survey was the first one to cover all 4 seasons for a continuous 12-month period. The 1955 survey, like most of the earlier ones, was conducted during April, May, and June. Therefore, this article will be devoted to

Miss Adelson has just retired as chief of the food consumption branch of the consumer and food economics research division of the Agricultural Research Service of the U. S. Department of Agriculture. She had major responsibility for planning the nationwide household food consumption survey reported in this article.

changes in food consumption from the spring of 1955 to the spring of 1965. Later there will be publications with separate data for each season of the survey year, April 1, 1965 to March 31, 1966.

The surveys, designed to provide information from a sample representative of housekeeping households in the United States, were made by the recall method and concentrated on food used at home. A household was considered "housekeeping" if at least one person ate 10 or more meals from home food supplies during the 7 days preceding the visit of an interviewer. This was the reference period for which each homemaker reported the home food consumption of her household.

Information was obtained on the kinds and amounts of foods used at home, their source, and, if bought, their cost. Food from all sources was included—purchased food, food from the home garden or farm, food received as gifts or instead of pay, and federally donated food. The age and sex of the persons who ate from home food supplies, the number of meals eaten by each one, the income of the family, and other related data important to the evaluation of household food consumption were also recorded. Experienced interviewers were employed and were given intensive training for the collection of the specific data.

This article is a brief on the dietary levels of households in the United States in the spring of 1965, some of the changes that have occurred since the spring of 1955, and some suggestions for strengthening nutrition education programs. More detail on the survey findings will be found in the publications listed at the end of this article. Publications to be issued later will give further detail.

### THE DIETARY SITUATION, SPRING 1965

The food consumption of 50 percent of the households surveyed in 1965 provided diets that met the allowances for all 7 nutrients. These diets were rated good. About 20 percent had diets that were below  $\frac{2}{3}$  of allowances in one or more nutrients. These diets were rated poor. About 30 percent of the households had diets that ranged between good and poor. Such diets are sometimes labeled "fair."

The dietary situation was similar among urban, rural nonfarm, and rural farm households. See chart 1.

From 90 to 95 percent of the households consumed food providing the allowances for protein, iron, thiamine, and riboflavin. Only 70 to 75 percent had diets providing the allowances for calcium, vitamin A value, and ascorbic acid. Diets of about

10 percent of the households provided less than  $\frac{2}{3}$  of the allowances for calcium (8 percent), for vitamin A value (10 percent), and for ascorbic acid (13 percent). See chart 2.

More households had diets that were below the allowances for 2 or more nutrients (28 percent) than for only one nutrient (22 percent). See chart 3.

Chart 1

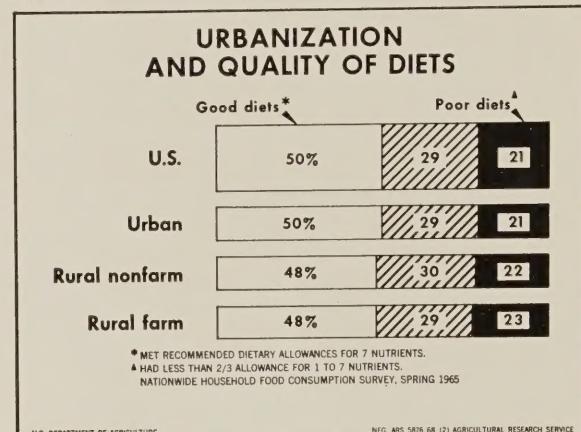


Chart 2

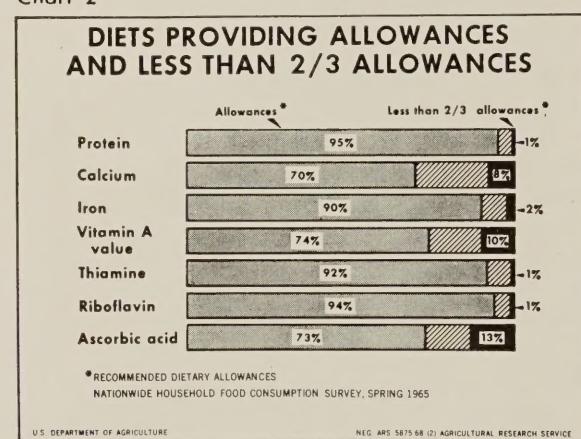
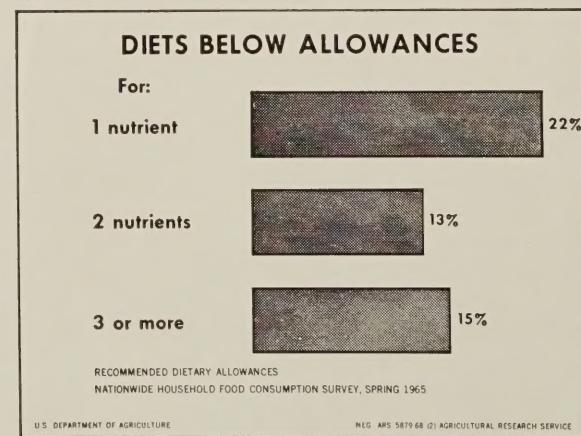
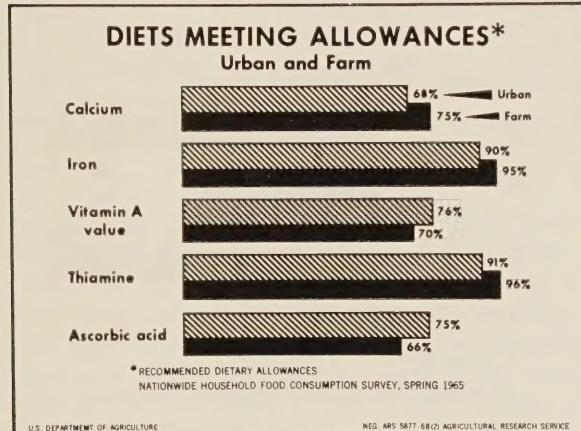


Chart 3



Urban families more frequently than farm families had diets meeting allowances for vitamin A value and ascorbic acid, reflecting their greater use of dark green and deep yellow vegetables and citrus fruit. Farm families, on the other hand, more frequently had diets meeting allowances for calcium, iron, and thiamine, reflecting their greater

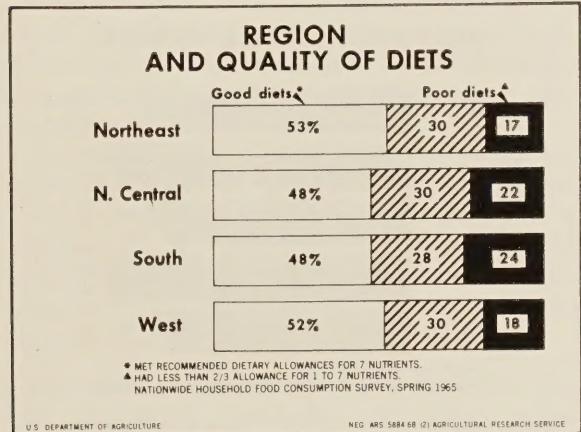
Chart 4



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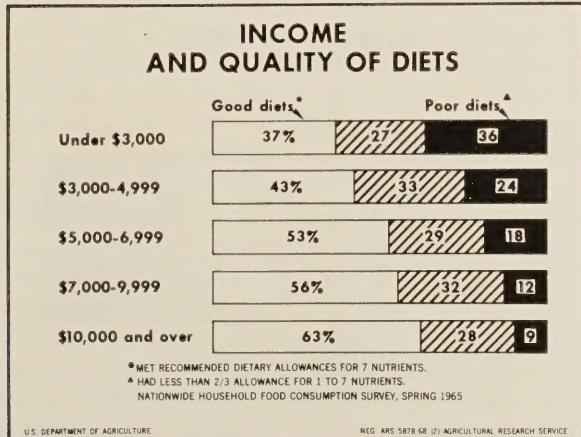
Chart 5



U.S. DEPARTMENT OF AGRICULTURE

NEC ARS 5884.6B (2) AGRICULTURAL RESEARCH SERVICE

Chart 6



U.S. DEPARTMENT OF AGRICULTURE

NEC ARS 5878.6B (2) AGRICULTURAL RESEARCH SERVICE

use of milk and milk products and grain products. See chart 4.

Poor diets were somewhat more frequent among households in the North Central and South than in the other 2 regions. See chart 5.

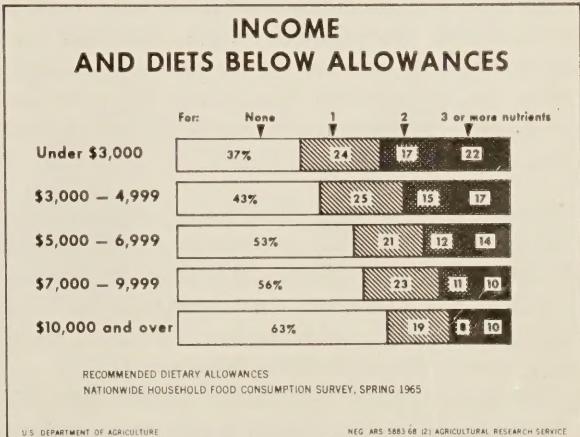
The percentage of households with good diets increased markedly with income. Some households in every income group in 1965 had poor diets, but the greatest percentages of poor diets occurred at the lowest income levels. Poor diets were 4 times as frequent among households with incomes under \$3,000 as among households with incomes of \$10,000 and over. The difference between the numbers of low-income households and high-income households with poor diets was even greater because the low-income group included more households. The under \$3,000 income group included 22 percent of the surveyed population; the \$10,000 and over income group included 12 percent. See chart 6.

The percentages of diets with one nutrient below allowances were fairly similar by income, 19 to 25 percent. However, the percentages with 2 and 3 or more nutrients below allowances were larger for households with low incomes than for those with high incomes. See chart 7.

### COMPARISON OF THE DIETARY SITUATION IN 1965 AND 1955

The meat group is the only major one that had increased in use in 1965 over 1955; it increased from 5.2 pounds per person per week to 5.7 pounds. (Each 21 meals from home food supplies during the week of a household's food report was counted as equivalent to 1 person.) Use of the other major groups of food decreased: the milk group from 9.6 to 8.8 pounds or 4.5 to 4.1 quarts (calcium equivalent), the vegetable and fruit group from 9.9 to 9.1

Chart 7



U.S. DEPARTMENT OF AGRICULTURE

NEC ARS 5883.6B (2) AGRICULTURAL RESEARCH SERVICE

pounds, and the bread and cereal group from 2.8 to 2.6 pounds (flour equivalent).

The meat group includes meat, poultry, fish, eggs, dry beans, dry peas, and nuts. The milk group includes milk, cream, cheese, ice cream, and other frozen milk desserts. The vegetable-fruit group includes potatoes and sweet potatoes. The bread-cereal group includes flour, flour mixes, cereal, meal, pastes, and bakery products—whole grain, enriched, and unenriched.

Use of fats and oils and sugar and sweets (not shown) stayed about the same by weight. Fats and oils decreased slightly from about 14 to 13 ounces per person per week. Sugar and sweets came to about 22 ounces in both periods. See chart 8.

Shifts in food consumption affected the nutritional quality of household diets. Somewhat fewer diets met the allowances for calcium, vitamin A value, and ascorbic acid in 1965 than in 1955. Each survey revealed that more diets were faulty in these 3 nutrients than in the other 4 nutrients studied—protein, iron, thiamine, and riboflavin. See chart 9.

Diets of 5 out of 10 households surveyed in 1965 and 6 out of 10 surveyed in 1955 rated good in that they met allowances for all 7 nutrients. About 20 percent of the diets in 1965 and about 15 percent in 1955 rated poor in that they were below  $\frac{2}{3}$  of the allowances for one or more of the nutrients. See chart 10.

The downward trend over the 10 years in the nutritional quality of the diets of the nation's families as a whole, of course, reflected changes in dietary levels in the 4 regions. Somewhat more diets were rated poor in the later period among families in the Northeast, North Central, South, and West.

#### CONTRIBUTING FACTORS TO 1965 FOOD CONSUMPTION PRACTICES

Survey questions did not probe into why families consumed the foods they did during the week surveyed. However, some of the reasons seem evident; others can be surmised. Completely objective determination is difficult due to the frequency of competing and supplementing forces.

**Money value of food**—The money value of the food consumed at home per person was similar in 1965 and 1955, after adjustment is made for the rise in the cost of food over the 10-year period. The average money value of home food was about \$8.80 per person per week in 1965. See chart 11.

The division of the "food dollar" in 1955 and 1965 was similar. The food dollar refers to a dollar's

worth of food including food purchased and food received free.

In both periods, on the average, the meat group (meat, poultry, fish, eggs, dry beans and peas, and nuts) took 38 cents of the food dollar and the vegetable-fruit group, 20 cents. There were some small shifts, however. The milk group dropped

Chart 8

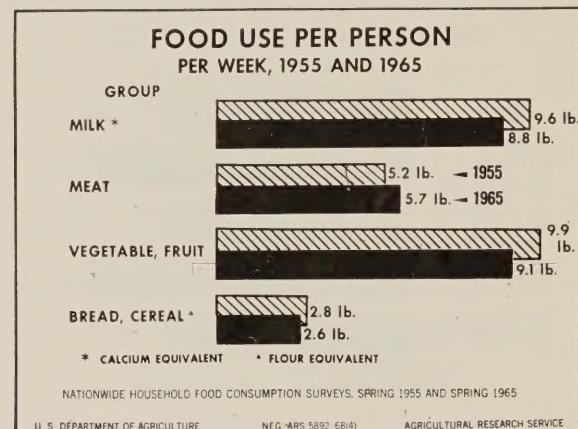


Chart 9

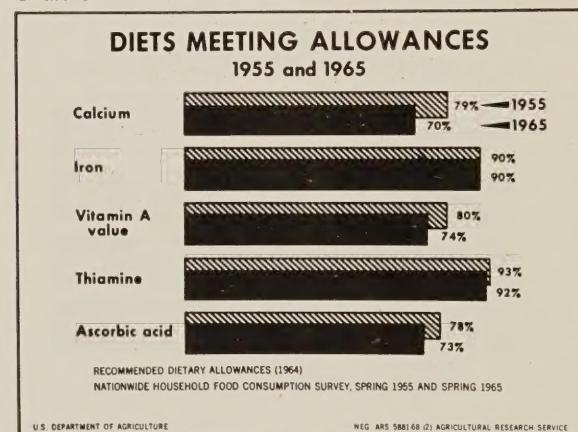
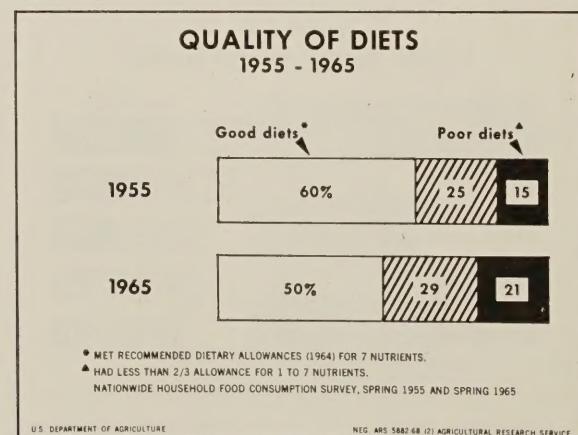


Chart 10



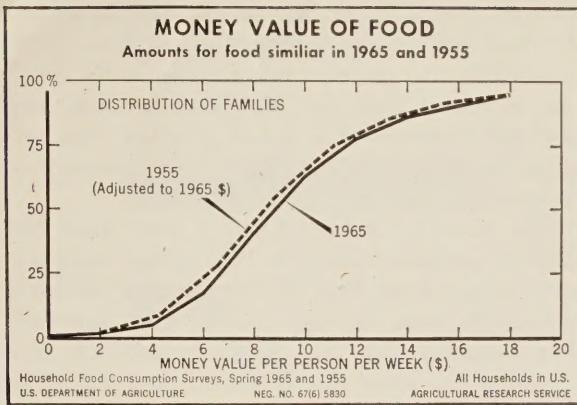


Chart 11

from 15 cents in 1955 to 13 cents in 1965. There were gains of 1 cent in both the bread-cereal group which rose from 11 to 12 cents and the "other foods" group, which went from 16 to 17 cents. The other foods group includes soft drinks, regular and low-calorie, which took about 1 cent of the food dollar in 1955 and about 2 cents in 1965. See chart 12.

**Price**—Shifts in amounts of foods purchased are usually inversely correlated with changes in their prices. But in the spring of 1965 price relationships were made unclear by the affluent economic situation of many families.

Increased consumption of poultry probably was related to a substantial price decrease for a popular food. However, beef consumption rose despite a price increase, indicating the force of food likes in an affluent society. The effect of price on food consumption in the spring of 1965 needs more searching analysis than has yet been possible.

**Convenience**—Research by agriculture and the food industry in developing convenience foods greatly added to the kinds of food on the market in 1965. Increasing use of many of these convenience foods indicates their consumer acceptance. Expenditures for 32 selected convenience foods averaged \$1.84 per person per week in 1955 and \$2.47 in 1965. These expenditures were a large share of total expenditures for purchased food, 27 percent in 1955 and 30 percent in 1965.

The increased use of convenience foods may be due in part to the increase in number of employed homemakers. Bakery products in 1965 took the place of a large share of the flour used in 1955. Frozen vegetables, washed, peeled, and cut and lighter to carry home, and ready-to-heat-and-serve canned ones won out over fresh ones. Frozen and chilled citrus fruit juices as well as fruit ade and

punch gained in use whereas citrus fruit as whole fruit decreased.

Some convenience foods decreased in use and were replaced by ones with greater convenience, lower price, or better flavor. There were shifts from evaporated and condensed milks to nonfat dry milk; from flour mix to canned biscuits, chilled dough, brown-and-serve rolls, and fully baked products; and from dried vegetables and fruit to canned or frozen ones.

Convenience features undoubtedly also contributed to the increased use of many other foods, among them cold breakfast cereals, lunch meat, frozen milk dessert, potato chips and sticks, and soups and gravies.

Use of commercially canned, frozen, and dried soups increased about 30 percent, from 0.7 pound in 1955 to 0.9 per household per week in 1965. In terms of servings the increase was from 3.6 to 4.9 six-fluid-ounce cups per household per week.

**Snacking**—More youths in the population and more snacking by people in general probably con-

Chart 12

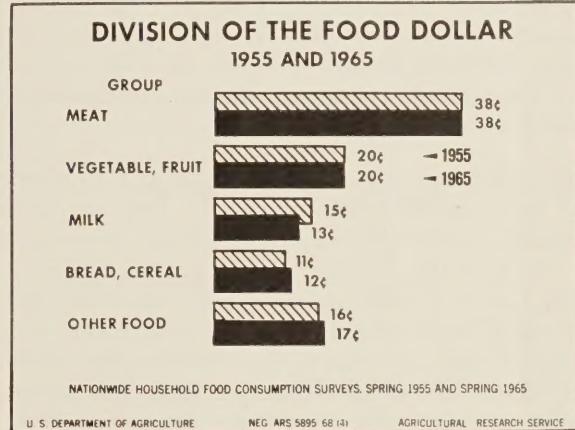
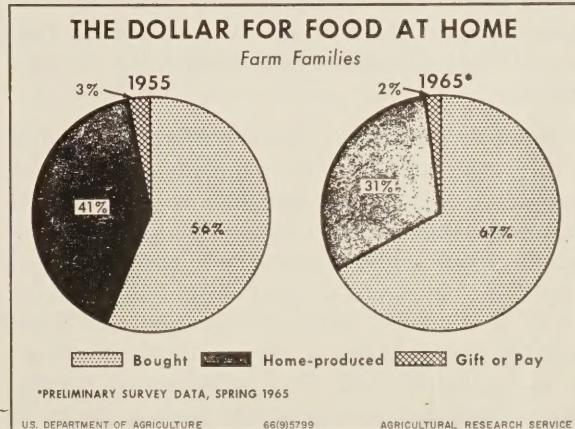


Chart 13



tributed to the increased home use of peanut butter, cheese, frozen milk desserts, fruit juice, cookies, and other foods good for snacking.

Much of the increase in snacking is an increase in beverage drinking. At home as at work there are "coffee breaks," the beverage not necessarily being coffee. It is estimated that in 1965, insofar as it can be determined from food consumption surveys, about 15 percent more 8-oz cups of beverage were consumed at home than in 1955. This assumes that foods usually served as beverages were consumed as beverages only. The estimated number of 8-oz cups of beverage consumed per household per week at the time of each survey follows:

	1955	1965
Milk: Total*	46 cups	39 cups
Whole milk	40	32
Other milk*	6	7
Juice: Total	6	7
Fruit	5	6
(Citrus)	(3)	(4)
Vegetable	1	1
Other:		
Coffee	38	48
Tea	20	21
Soft drinks	5	9
Fruit ade, punch	1	13

\* Includes buttermilk, skim milk, chocolate milk, and baby and diet formulas

The trend has been away from milk as a beverage at home toward coffee, soft drinks, fruit ade, and punch.

Some of the decreased home use of milk may result from increased school use of milk. The Type A school lunch program, which serves a half pint of milk with each lunch, reached over half again as many children in 1965 as in 1955. The school milk program reached 6.4 times as many children in 1965 as in 1955, when it was being started. Through the combined programs, school children received more than 2½ times as much milk in 1965 as in 1955, 5,859 million half pints of milk vs. 2,256 million.

**Affluence, Mobility**—Greater affluence coupled with greater mobility of the population in 1965 than earlier appear to have contributed to a blending of the food habits and practices of the various population groups in the country more than noted before. For example, food selections of families in the North had moved closer to those in the South through increased use of cornmeal and soft drinks in the spring of 1965. Food selections of families in the South had moved closer to those in the North

through greatly increased use of bakery products and beef and greatly decreased use of flour, meals and cereals, and pork in 1965. Families in the North also increased their use of bakery products and beef and decreased their use of pork but their percentage changes over the decade were smaller than those in the South.

The practices of farm families were more like those of nonfarm families in 1965 in that more was spent on purchased food for home use and on meals and snacks eaten out than in 1955. Also, farm families increased their use of bakery products purchased at the store and decreased their use of ingredients for home baking to a greater degree than did nonfarm families.

The proportion of the food used at home by farm families that was home produced declined greatly from 1955 to 1965. See chart 13.

The percentage of the money value of vegetables and fruit that farm families home produced, however, remained about the same, nearly 40 percent. For many farm families, it probably is more feasible to tend home gardens than to raise farm animals for home use.

Farm families in spring 1965 used a little more than  $\frac{1}{2}$  pound of fresh or home processed dark green vegetables per household per week, about as much deep yellow vegetables, and more than 1 pound of tomatoes. Most of the dark green vegetables, about  $\frac{1}{2}$  of the deep yellow vegetables, and about  $\frac{1}{2}$  of the tomatoes were home produced. If farm families had raised more, the chances are that they would have used more. This would have improved their diets in vitamin A value and ascorbic acid, two of the limiting nutrients in family diets. Proportionately more rural than urban diets were below  $\frac{2}{3}$  of the allowances for these vitamins in 1965.

#### CONTRIBUTION OF FOODS TO NUTRIENTS

The shifts in home food consumption between 1955 and 1965 meant some shifts in the food sources of nutrients. However, essentially the same groups of food remained the major contributors to the nutrients.

The table (page 454) gives the division of the food dollar and percentage contribution of the food groups to the calories and nutrients in the spring of 1965. Nearly all food groups made a contribution to at least 2 nutrients that equaled or exceeded the proportion of the food dollar they represented as well as contributions to other nutrients.

The milk group, which took 13 percent of the food dollar, furnished 60 percent of the calcium,

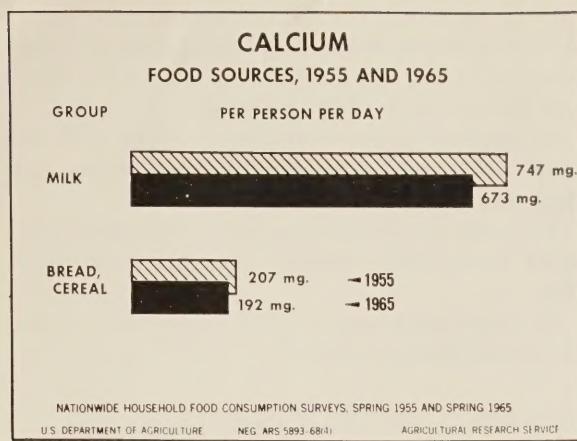


Chart 14

nearly 40 percent of the riboflavin, and 20 percent of the protein.

The meat group, which took the largest share of the food dollar, almost 40 percent, furnished over 50 percent of the protein and over 40 percent of the nutrients fat and iron.

The vegetable-fruit group, which took 20 percent of the food dollar, furnished nearly 90 percent of the ascorbic acid and 50 percent of the vitamin A value.

Grain products—whole grain, enriched, and unenriched, which took 12 percent of the food dollar, furnished 40 percent of the thiamine and about 30 percent of the iron.

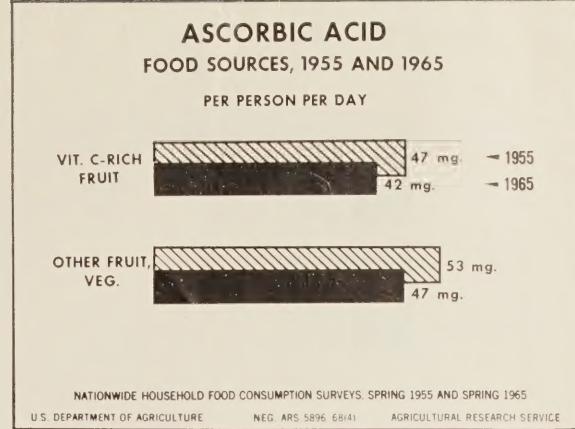


Chart 15

Fats and oils, which took 4 percent of the food dollar, furnished nearly 30 percent of the nutrient fat and about 10 percent of the vitamin A value.

Sugar and sweets, including soft drinks, which took 6 percent of the food dollar, furnished 10 percent of the calories but only 5 percent or less of individual nutrients.

The foods which contribute most to the nutrients in which both 1955 and 1965 diets met allowances least frequently—calcium, vitamin A value, and ascorbic acid—contributed less in 1965 than in 1955 due to decreases in their use. See charts 14, 15, and 16.

To improve diets low in calcium, the accent

Percentage division of the money value of food and contribution of home foods to nutritive value of diets

FOOD GROUP	MONEY	FOOD	PRO-	FAT	CAL-	IRON	VITAMIN	THIA-	RIBO-	ASCR-
	VALUE	ENERGY	TEIN	%	%	%	A VALUE*	MINE*	FLAVIN*	BIC ACID*
	%	%	%	%	%	%	%	%	%	%
All food †.....	100	100	100	100	100	100	100	100	100	100
Milk, cream, ice cream, cheese.....	13	13	20	14	60	1	12	10	38	5
Meat, poultry, fish, eggs, dry beans and peas, nuts.....	38	28	52	44	7	41	24	29	30	1
Vegetables, fruit: All.....	20	10	7	2	9	18	50	19	9	88
Vegetables.....	12	6	6	2	6	13	42	12	7	41
Dark green, deep yellow.....	1	†	†	†	2	2	27	1	1	7
Fruit.....	7	4	1	†	3	5	7	6	3	47
Vitamin-C-rich.....	3	1	1	†	2	2	4	4	1	41
Grain products: All.....	12	26	20	9	17	31	1	40	19	1
Enriched or whole grain.....	7	17	15	3	13	27	†	37	16	†
Fats, oils.....	4	12	‡	29	1	†	11	†	†	†
Sugar, sweets: All.....	6	10	1	1	2	3	1	1	1	5
Soft drinks, punches ‡.....	3	2	†	†	†	†	1	†	†	5
Whisky, beer, wine.....	4	1	†	0	†	†	0	†	†	0
Other §.....	4	1	†	†	3	5	†	1	2	0

\* Cooking losses deducted.

† Percents may not add to 100 because of rounding.

‡ 0.5 or less.

§ Includes punches, ades, and beverage powders; excludes low-calorie drinks.

Includes yeast, baking powder, plain chocolate, cocoa, and coffee. Low-calorie drinks, seasonings, and similar items are included only in money value.

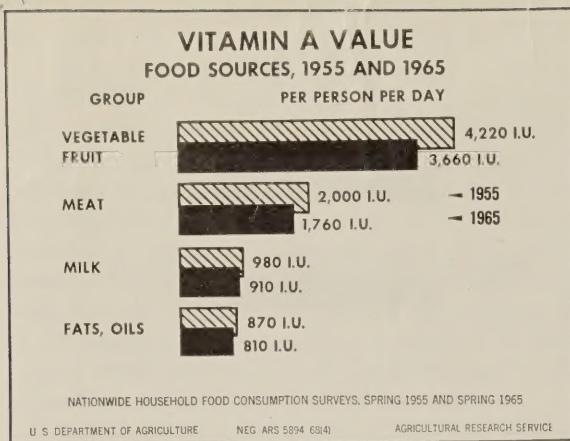


Chart 16

needs to be on increased use of the milk group; to improve diets low in vitamin A value, on vegetables—especially dark green and deep yellow ones; and to improve diets low in ascorbic acid, on vitamin-C-rich fruit and on vegetables. Increasing use of these foods would also improve diets that are below allowances for other nutrients because these foods are also substantial contributors of some other nutrients.

#### IMPLICATIONS OF THE SURVEY FOR NUTRITION EDUCATION

What can home economists do to help families achieve better diets?

1. Intensify nutrition education programs. Many U. S. families at all income levels need guidance in meeting their nutritional needs from the great abundance of foods available. Individuals need nutrition education to help them choose wisely in restaurants, snack bars, and the school lunchroom. Use mass media and other means to reach everyone. Since the same dietary shortages were shown in 1965 as 10 years earlier, new, imaginative approaches are needed.

2. Emphasize increased consumption of milk and milk products, fruits, and vegetables.

3. Help low-income families to make best use of

the less-expensive foods. Help them to make use of such programs as the federal food donation or food stamp program, the school lunch, school breakfast, and Head Start feeding programs.

4. Develop nutrition programs adapted to the needs of different age groups: young families, children, teenagers, and older folk.

5. Guide teenagers and others in the selection of snack foods that contribute nutrients to the day's diet.

6. Assist homemakers in their selection and use of the convenience foods.

#### REPORTS NOW AVAILABLE FROM THE 1965-66 NATIONWIDE SURVEY OF HOUSEHOLD FOOD CONSUMPTION

##### PRELIMINARY REPORTS

CFE-300, *Money Value of Food Used by Households in the United States, Spring 1965*

ARS 62-16, *Food Consumption of Households in the United States, Spring 1965*

ARS 62-17, *Dietary Levels of Households in the United States, Spring 1965*

Single copies are available upon request from the Consumer and Food Economics Research Division ARS, U.S. Department of Agriculture Federal Center Building Hyattsville, Maryland 20782

##### FINAL REPORTS

Report No. 1. *Food Consumption of Households in the United States, Spring 1965*. For sale, Supt. of Documents, Government Printing Office, Washington, D.C. 20402, \$1.25.

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